182 First, through time, the gardens tend to radiate further and further from any given residence point since, given the 13-year planting-fallow 241 cycle, plots near the village will be exhausted. Since the major garden 361 resource areas lie in a crudely east-to-west direction, there will be a slow westward migration of the geographic center of garden activities, enough so that at some point, the village is suspended, as it were, among distant resource points (see Maps), and enhanced by the dispersed nature of the hunting and fishing, and to some extent the gathering, areas. If the "suspension" is weighted more in one direction than another, there will be some tendency either to move the village or to send out temporary or permanent branches of it, respectively in the form of work cottages in the swiddens or in larger long-term house groups which are intermittently occupied. This process is, in fact, easily observed among the Yaruro in existent and abandoned house and subsidiary village sites scattered over the whole territory. Similarly, the locus of gathering, so important in [221] summer, moves further and further from the village. This, together with the considerable shift to fishing and river-hunting in summer, as well as the need for water, causes an extensive seasonal transhumance to occur within the territory. These factors contribute to fissioning as well as to inhibiting the development of permanently located villages, let alone larger aggregations. Thus, with a radiating ecology, a degree of group dispersion and geographical mobility within the territory is to be expected and is indeed characteristic of the Yaruro.

512 Second, if one examines the location of all resources it will be seen that, taken together, they constantly enjoin a dispersal of the labor force in all directions, regardless of season, so that more or less equivalent quantities of labor are being used at the same time in many varying kinds of productive activity independently of each other — at the peripheries of the territory, in the areas between, or in the village centers themselves, [462] where the women are constantly doing the significantly important work of [252] converting otherwise unusable food resources, like raw, bitter manioc or uncooked corn, into edibles.

476 Third, it will be noted that none of the Yaruro technological processes require cooperative work, even when they may permit it, if it were so desired. On the whole, the productive activities might be described as dispersive of labor, whether it is individuals or small groups of twos or threes who go out to keep each other company. Even the work of preparing [241] the swiddens is carried out individually, though two or three men may [463] work as neighbors in what appears as a single plot. Further, the technology is such as to require no highly specific and difficult or esoteric skills. The [242] most difficult skill to acquire is the knowledge of the soil types and appropriate planting procedures attached to each. Thus, each adult is in 462 a position to learn the inventory of technological knowledge appropriate 463 to his or her sex, and somewhat of that belonging to the other sex too, and to apply it by himself whenever he wants or must. A man, well-instructed in Yaruro technology, could probably subsist alone successfully for long periods of time. One divorced adult man, although he was largely fed by his

represent his people to the outside world without consultation and to make arbitrary decisions for them inside the community — mainly in his own interest — was, with the consent of the community, assassinated by one of the members, now in excellent standing in that community as a respected shaman. The chief in question had stepped beyond the bounds designated for his status. In sum, the position of chief, even though formally recognized by Yaruro society and reinforced by formal recognition and appointment by Venezuelan authorities, is feeble as an institution and as a status.[8] It is our hypothesis that ecological conditions of Yaruro life determine the form of the chieftainship in such a way that its stronger institutionalization would be impossible, and we turn to this question now.

III

Yaruro subsistence activities[7] comprise swiddening, gathering, pig herding, hunting and fishing, mentioned in the order of their importance as contributors to the total food supply as measured in calories.[9] Horticulture probably provides 60—70% of the total annual food supply. The horticulture practiced is characteristic of tropical forest slash-and-burn gardens, with a slow rotation of plots in order to permit soil renewal and weed control. Trees are cut, at present with steel axes and formerly, apparently, with axes of bone or shell, and then burnt. Occasional fences are roughly made of the logs to keep out pigs. Bitter manioc (*Manihot utilissima*),[9] in several varieties, is the main crop, though sweet manioc (*Manihot aipi*), also in several varieties, is planted too, as are corn, bananas, sugar cane — each in several varieties — and a number of lesser crops such as melons, squashes, pumpkins, pineapples, sweet potatoes, and yautia or ocumo (*Xanthosoma sagittifolium*). Crops are planted with a digging stick which may also be used in harvesting. Gardens are weeded, once only, early in the growth of the crops. Other than clearing, the only soil preparation is the construction of hills for planting bananas. This is done by burning hills made by a certain species of ant (*huachaquero*). The hills, which are quite wide and low, are filled with organic matter enriching the soil.[10] Harvesting is aided with baskets for carrying the crops. Baskets contain about half a bushel or less. No fertilization, no terracing, no drainage, no irrigation, no extensive turning of the soil is done.

The gathered resources include a number of roots, particularly changuango, changuanito, and guapo (*Marante arundinacea*);[11] varied fruits, especially that of

[8] Professor Benjamin N. Nelson informs me that in medieval Spain, village communities had an official, also called *capitan*, whose function was to treat with state functionaries representing the world beyond the village community's frontier. It is possible that the Yaruro capitan, and many others in Venezuela, are an acculturative transfer of this office to tribal groups. In the case of the Yaruro, this would have happened some 250—300 years ago.

[7] The use, here, of the terms 'activity', 'tasks', 'techniques', 'tools', 'resources', and 'habitat' corresponds to the definitions given in Leeds, 1960 b.

[8] Cf. Leeds, 1961, which gives this data in detail and describes the habitat and horticulture *in extenso*.

[9] Native terms for these crops are given *ibid.*

[10] *Ibid.*, note 9, contains data on soil values.

[11] Identifications are from Pittier, 1926.